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GAO/13;RCED-85-94

REPORT BY THE

COMPLETED

Comptroller General

OF THE UNITED STATES

Federal Agencies' Policies And Practices Are In Accordance With Patent And Trademark Amendments Of 1980

The Patent and Trademark Amendments of 1980 allows small businesses and nonprofit organizations the option to retain title to inventions resulting from federally sponsored research projects. This law also reiterates federal agencies' authority to grant licenses for inventions that they own. In February 1983 President Reagan directed federal agencies, to the extent permitted by law, to adopt substantially the same policies set forth in the law for all contractors as well as for small businesses and nonprofit organizations.

GAO found that the 10 federal agencies that accounted for 98 percent of the total actual and estimated federal research and development (R&D) obligations in fiscal years 1983 and 1984, respectively, are allowing grants, contracts, and cooperative agreements recipients to retain title to inventions discovered while performing federally funded research projects. These agencies are also granting licenses for inventions that they own.

In addition, GAO found that the Commerce Department is fulfilling its lead agency role of monitoring federal agencies' implementation of the law. Also, federal officials and representatives of various small businesses' and nonprofit organizations' trade asssociations and interest groups have mixed perceptions of whether the law has caused any increases or decreases in their groups' R&D activities.

This is the third report submitted by the Comptroller General on how federal agencies are implementing Public Law 96-517.

GAO/RCED-85-94
AUGUST 29, 1985

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COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON D.C. 20548

B-207939

The Honorable Strom Thurmond
Chairman, Committee on the Judiciary
United States Senate

The Honorable Peter W. Rodino, Jr.
Chairman, Committee on the Judiciary
House of Representatives

This report discusses the implementation of the Patent and Trademark Amendments of 1980 (the act) (Public Law 96-517) by 10 federal agencies.[1] The act establishes a uniform patent policy for assigning title to inventions made by small businesses and nonprofit organizations under federally sponsored research projects. It requires us to report to your Committees at least once a year on how federal agencies are carrying out this law and other aspects of government patent policies and practices as appropriate. This is the third report[2] we are submitting under the act.

In carrying out our responsibility this year, we found that:

--The 10 federal agencies are implementing the act's titling provisions by (1) assigning small businesses and nonprofit organizations title to inventions resulting from federally funded projects and (2) implementing the licensing provisions by granting licenses for government-owned inventions that were discovered before and after passage of the act.

--The Department of Commerce is fulfilling its lead agency role of monitoring federal agencies' implementation of the act.

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[1]The Departments of Defense (DOD), Energy (DOE), Agriculture (USDA), Transportation (DOT), Health and Human Services (HHS), Interior, and Commerce; the National Aeronautics and Space Administration (NASA); the National Science Foundation (NSF); and the Environmental Protection Agency (EPA).

[2]GAO issued the first report on May 20, 1982, and the second report on February 28, 1984.

--Officials representing the 10 agencies and various small businesses' and nonprofit organizations' trade associations and interest groups have mixed perceptions of whether the law has caused any increases or decreases in the groups' research and development (R&D) activities.

BACKGROUND

Federal efforts to establish a uniform patent policy over many years have stemmed from a concern over what should be the government's policy with regard to the ownership of inventions resulting from federally funded research and development. There is a consensus that the public interest is best served by a patent policy that encourages the utilization of inventions and promotes the participation of contractors. However, of the approximately 25,000 government-owned inventions, only about 5 percent have been used. Observers of the patent system have alleged that this low rate of utilization was due to restrictive government policies and practices--particularly policies pertaining to the retention of title to inventions resulting from federally funded research and development and the practice of not granting exclusive licenses. The lack of uniformity in these government policies and practices is believed to affect participation in government-funded research and development.

Recent federal efforts to establish a uniform patent policy began in 1963 when the Presidential Memorandum and Statement of Government Patent Policy was issued. Since then, special commissions have called for uniform policies for awarding patent rights to contractors. To that end, hearings were held and bills introduced throughout the 1970's. Nonetheless, as we noted in testimony, by 1979 the goal of a uniform patent policy had not been reached. In the early 1980's, four significant events occurred that shaped current patent and licensing policy:

(1) On December 12, 1980, Public Law 96-517 was enacted to establish a uniform patent policy for inventions made by small businesses and nonprofit organizations, including universities, under federally funded research projects. The act gives these groups the option to retain title to inventions made under federal grants, contracts, and cooperative agreements (hereafter, these three categories are referred to as "funding agreements"). The act reiterates federal agencies' authority to grant licenses for inventions owned by the government, outlines uniform guidance for granting licenses, and takes precedence over approximately 26 conflicting statutory and administrative patent policies.

(2) On February 10, 1982, the Office of Management and Budget (OMB) issued Circular A-124 implementing Public Law 96-517. The circular requires that each funding agreement with small businesses and nonprofit organizations contain a standard patent

rights clause outlining all parties' rights to inventions resulting from federally funded projects. The clause also lists reporting and procedural requirements that small businesses and nonprofit organizations must follow once they elect to retain title to an invention.

(3) On February 18, 1983, President Reagan signed a memorandum directing federal agencies, to the extent permitted by law, to adopt substantially the same policies set forth in Public Law 96-517 for all contractors as well as for small businesses and nonprofit organizations. OMB incorporated this memorandum in an amendment to Circular A-124, which was issued on March 24, 1984. In addition, the General Services Administration (GSA) amended the Federal Acquisition Regulations on March 30, 1984, so that R&D agencies would also implement the act and the President's memorandum.

(4) On November 8, 1984, the President signed Public Law 98-620 amending Public Law 96-517. First, the amendment eliminates the requirement under the act that the Comptroller General review and comment on agencies' written statements (commonly called "exceptional circumstance determinations"). These statements set out the agencies' justification for their determinations not to allow small businesses and nonprofit organizations the option to retain title to inventions. However, the Comptroller General is still required to report, at least once a year, on how federal agencies are carrying out the act and other aspects of government patent policies and practices, as he believes appropriate. Second, the Secretary of Commerce is now responsibile for reviewing exceptional circumstance determinations and informing agency heads and OMB's Office of Federal Procurement Policy if any individual determination or pattern of determinations is contrary to the act. The Secretary may also issue regulations governing patent rights and establish standard funding agreement provisions.

OBJECTIVES, SCOPE, AND METHODOLOGY

Our objectives were to determine (1) whether federal R&D agencies' procurement policies, regulations, and practices implement the titling and licensing provisions under the act and the President's February 18, 1983, memorandum, (2) whether Commerce is fulfilling its role in implementing the act, and (3) small businesses' and nonprofit organizations' perceptions of whether the law and the President's memorandum have caused changes in their R&D activities.

We performed audit work at the 10 R&D agencies that accounted for 98 percent of the total actual and estimated federal R&D obligations in fiscal years 1983 and 1984, respectively. We reviewed these agencies' titling and licensing activities between June 1, 1983, and March 1, 1985. To determine whether federal agencies are implementing the act's titling and licensing provisions and the President's memorandum, we

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--interviewed officials in the agencies responsible for patent matters;

--analyzed R&D agencies' procurement and assistance regulations and internal policy guidance for acquisition of title by the government or for allowing funding agreement recipients to retain title;

--analyzed R&D agencies' regulations for licensing federally owned inventions;

--obtained statistics on R&D agencies' titling and licensing activities since passage of Public Law 96-517; and

--reviewed samples of R&D agencies' 1984 funding agreements with contractors and grantees.

The funding agreements we reviewed were limited to new R&D awards made during fiscal year 1984 by the 10 agencies' procurement offices in the Washington metropolitan area. Our methods of selecting and reviewing agreements varied, depending on the number of agreements reported to us and whether agencies reported the agreements separately by type for the entire agency or by individual organizational units within agencies. Appendix I gives specific details on the methods used to select agreements at each of the agencies.

We interviewed officials in Commerce's Office of Productivity, Technology, and Innovation and reviewed internal policy guidance and draft regulations to determine whether Commerce is carrying out its responsibilities under Circular A-124. We also interviewed representatives of small businesses' and nonprofit organizations' trade associations and interest groups to obtain their perceptions of whether the act and the President's memorandum have caused changes in their R&D activities. In addition, we obtained from GSA and OMB copies of the federal policy guidelines and acquisition and licensing regulations that agencies must follow when granting title to inventions made under federally funded projects or issuing licenses for federally owned inventions.

We conducted our audit in accordance with generally accepted government auditing standards.

FEDERAL AGENCIES' IMPLEMENTATION OF PATENT TITLING PROVISIONS

As required by the act, OMB Circular A-124, and the Federal Acquisition Regulations, all 10 agencies have revised their procurement regulations to include the titling provisions for allowing contractors and grantees, regardless of size, to retain title to inventions. The regulations and guidance set forth patent policies and specify the wording that agencies' procurement staff

should use in agreements with their contractors and grantees. Since we last reported in February 1984, none of the 10 agencies has made exceptional circumstance determinations in order to retain title to any invention resulting from agreements awarded under the act.

Overall, the 10 agencies awarded 17,118 new funding agreements in fiscal year 1984. About 10,957 of the 17,118 agreements were awarded by the agencies' procurement staffs located in the Washington metropolitan area. We reviewed 1,026 of the 10,957 agreements to verify whether the agreements contained the required patent rights clauses.[3] Of the 10 agencies included in our review, 9 had either included or incorporated a patent clause by reference in the sample funding agreements we reviewed.

At EPA, we found that 46 of the 50 grants and cooperative agreements reviewed did not include a patent clause or incorporate a patent clause by reference. The remaining four grants and cooperative agreements made reference to the required patent clause. Agency officials said that they did not know why there was no information on patent rights in the 46 agreements.

According to officials at EPA and NASA, those agencies have had to issue waiver regulations to allow businesses not covered by the act, especially large businesses, to retain title to inventions. The two agencies issued waivers because the President's memorandum does not take precedence over existing laws, which give patent ownership rights to the agencies. For example, the Resource Conservation and Recovery Act of 1976 (42 USC §6901), which gives EPA the right to retain title to any new invention made under contracts, grants, or cooperative agreements awarded to large businesses was not affected by the act. Similarly, the section of the National Aeronautics and Space Act of 1958, which gives NASA the title to inventions discovered under NASA agreements, remains applicable to large businesses. At both agencies, however, waivers are not automatically given to large businesses; those businesses must first request a waiver and the agencies decide each case individually.

At NSF and the National Institutes of Health (NIH), we found that as an administrative procedure for issuing grants, agency officials send documents separate from the grants agreements to awardees to explain their patent rights. These documents contain either a full patent clause or references to the titling provisions included in the act, OMB Circular A-124, and the President's memorandum. The documents also contain information concerning special conditions applicable to the R&D awards.

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[3]These clauses, which outline the contractors', grantees', and federal agencies' rights to retain title to inventions, were published in the Federal Register on March 30, 1984, under parts 52.227.11 through 52.227.13.

The total number of new R&D agreements entered into by the 10 agencies differed significantly during fiscal years 1982-84. As shown in table 1, DOD, NASA, and NSF awarded numerous R&D agreements over the 3-year period, whereas Commerce and Interior issued few R&D agreements.

Table 1

Number of New R&D Funding Agreements

Agency	Fiscal year 1982 Number of agreements	Fiscal year 1983 Number of agreements	Fiscal year 1984 Number of agreements
Commerce	176	232	314
DOD	5,820	4,884	3,053
DOE	492	741	656
DOT	537	617	302
EPA	451	353	378
HHS (NIH)	[a]	[a]	3,366
Interior	[a]	[a]	651
NASA	1,580	1,491	1,522
NSF	1,608	4,452	5,546
USDA	1,392	1,406	1,330
Total	12,056	14,176	17,118

[a]This information was unavailable during our review.

It is difficult to relate the number of new R&D agreements awarded in fiscal years 1982-84 with the number of inventions reported to the agencies because the number of inventions discovered is influenced by several factors, including the nature of the research performed for the agency. Also, the number of inventions shown were those reported agency-wide under all active funding agreements for the given fiscal years. The figures also included agreements not covered by Public Law 96-517. As shown in table 2, some agencies reported few inventions in fiscal years 1982-84. This happened because agencies such as Commerce, DOT, and EPA generally do not award agreements for the kind of experimental, developmental, or research work that tends to result in patentable inventions.

Table 2

Summary of Inventions Reported to Federal Agencies[a]

Agency	Fiscal year 1982 Number of inventions reported	Fiscal year 1983 Number of inventions reported	Fiscal year 1984 Number of inventions reported
Commerce	0	12	7
DOD	1,881	2,239	2,284
DOE	1,669	1,716	1,370
DOT	13	5	1
EPA	22	18	13
HHS (NIH)	637	550	727
Interior	104	83	36
NASA	942	1,083	989
NSF	98	133	129
USDA	97	74	73
Total	5,463	5,913	5,629

[a]Includes inventions reported by agencies' employees.

Because many agency officials did not know the number of inventions reported each year from agreements awarded under Public Law 96-517, we could not determine whether more inventions are being reported as a result of the act. According to the officials, they do not collect data specifically on patent activities.

FEDERAL AGENCIES' IMPLEMENTATION OF EXISTING LICENSING POLICIES

All 10 R&D agencies have adopted GSA's regulations for granting licenses for federally owned inventions. Some agencies have been very active in granting licenses and collecting royalties on inventions owned by the federal government.

Sections 207 and 209 of Public Law 96-517 clarify federal agencies' authority to grant three types of licenses--exclusive, partially exclusive, and nonexclusive--to inventions owned by the government before and after passage of the act. These licenses may require royalties or be royalty-free. Under an exclusive license, only one licensee has rights to market an invention. A partially exclusive license may restrict the number of licensees, the term of exclusivity, the field of use, or the territory. A nonexclusive license gives an unlimited number of licensees rights to market an invention; or it could, if the licensee was the only requester, give a single licensee rights to market an invention.

Although the Commerce Department's National Technical Information Service (NTIS) has issued all three types of licenses, it was the only agency to negotiate any partially exclusive licenses in fiscal years 1982-84. According to an NTIS official, this type of license may be issued when two qualified companies apply for an exclusive license to an invention and the market is large enough to support only two companies marketing the invention. Therefore, instead of giving an exclusive license to one company or nonexclusive licenses to several companies, the officials will grant partially exclusive licenses.

Prior to approval of Public Law 98-620 on November 8, 1984, which gives licensing authority to the Secretary of Commerce, GSA was responsible for developing regulations to implement the law's licensing provisions. To date, Commerce has not issued any new licensing regulations. According to an agency official, Commerce is currently adopting GSA's regulations on an interim basis until it promulgates its own. We found that all 10 R&D agencies follow GSA's regulations (41 CFR Part 101-104, effective Sept. 1, 1982) when granting licenses for federally owned inventions. DOD and NASA have agency-specific licensing guidelines in addition to GSA's regulations. These guidelines, where applicable, follow GSA's licensing regulations.

Under Public Law 96-517, federal agencies can transfer their licensing activities to another federal agency. Many agencies rely on NTIS to perform some of their licensing services because, they say, NTIS staff has the expertise necessary to advertise available licenses, evaluate development and marketing plans, and negotiate the types of licenses and royalty fees with potential licensees.

In the last 3 years, HHS and DOT have been the only two agencies included in our review that relied entirely on NTIS to perform all of their licensing services. Except for three agencies that grant their own licenses, all others share licensing services with NTIS. We found that agencies that share licensing services with NTIS usually rely on it to issue their exclusive licenses.

For the past 3 fiscal years, the overall number of licenses granted by the 10 R&D agencies and NTIS has fluctuated. As shown in table 3, five agencies (NASA, USDA, DOE, Navy, and NTIS) have been very active in licensing federally owned inventions, while three other agencies (DOT, NSF, and EPA) did not issue any licenses between fiscal years 1982 and 1984. NIH had 15, 30, and 24 licenses granted in fiscal years 1982, 1983, and 1984, respectively, by NTIS. USDA had 17 and Commerce had 11 licenses granted by NTIS over the 3-year period. Interior had one license granted in both fiscal years 1982 and 1983 by NTIS, whereas the Army had only one license granted by NTIS over the past 3-year period.

Table 3

Summary of Licenses
Granted by Federal Agencies
(FY 1982-84)

Agency	Fiscal year 1982	Fiscal year 1983	Fiscal year 1984
Commerce	0	0	2
NTIS[a]	27	41	36
DOD			
Air Force	2	1	0
Army	5	5	5
Navy	15	9	11
DOE	6	16	25
DOT	0	0	0
EPA	0	0	0
HHS/NIH	0	0	0
Interior	12	1	4
NASA	43	25	33
NSF	0	0	0
USDA	21	40	26
Total	131	138	142

[a]These figures represent the total number of licenses NTIS granted on behalf of 5 of the 10 R&D agencies--specifically, the Army, Commerce, Interior, NIH, and USDA--each fiscal year.

Over the past 3 years, nonexclusive licenses represented about 80 percent of all licenses issued, and the remainder were exclusive licenses. NTIS was the only agency that issued any partially exclusive licenses in fiscal years 1982-84.

Five of the seven agencies, including the Army and Navy, that granted licenses during this period collected user fees and royalties. Table 4 shows the amount of fees and royalties collected for federally owned inventions over the past 3 years. According to agency officials, most of the royalties reported were collected from inventions the government licensed before Public Law 96-517 was enacted. The officials also said that the royalties were usually based on a percentage of sales for the licensed inventions and negotiated separately for each license.

Table 4

Summary of Royalties Collected on Federally Owned Inventions

Agency	Fiscal year 1982	Fiscal year 1983	Fiscal year 1984
Commerce/NTIS	$155,000	$ 907,000	$ 868,000
DOD			
Army	30,592	23,877	10,316
Navy	57,935	28,113	14,625
DOE	208,235	82,450	53,700
NASA	14,877	24,025	98,258
Total	$466,639	$1,065,465	$1,044,900

Public Law 96-517 states that federal agencies should give small businesses first preference when issuing exclusive licenses or partially exclusive licenses. Three of the five agencies active in licensing provided documents showing that small businesses received a large share of the licenses. For example, during the 3 fiscal years, over 85 percent of DOE's licenses went to small businesses; at NASA, 80 percent; and at USDA, more than 98 percent. Although NTIS officials do not routinely record information on small businesses' licenses, they estimated that about 50 percent of their licenses went to small businesses. Navy and NTIS officials said that they try to give licenses to organizations best able to market an invention, regardless of the organization's size, to the extent that they are able to do so.

Under the act, licensees are required to report periodically on inventions' use under federally issued licenses. If agency officials find that a licensee is not satisfactorily using the license, it can be terminated. Interior and NTIS are the only agencies that have terminated licenses because licensees had not shown diligence in commercialization and other companies appeared more capable to market the invention.

DEPARTMENT OF COMMERCE'S EFFORTS TO FULFILL ITS LEAD AGENCY PATENT RESPONSIBILITIES

Commerce's lead responsibility for regulating and monitoring patent activities is specified in OMB Circular A-124 and Public Law 98-620. Under OMB Circular A-124, Commerce is responsible for (1) monitoring agencies' regulations and procedures for consistency with Public Law 96-517 and the circular, (2) developing a system for contractors to use for reporting on inventions' use, (3) accumulating, maintaining, and publishing statistics on inventions' use, and (4) making recommendations to OMB on changes

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needed in the circular. Under Public Law 98-620, Commerce reviews and informs agency heads if agencies' exceptional circumstance determinations are contrary to the policies and objectives of Public Law 96-517. Commerce also issues regulations governing patent rights and establishes standard funding agreement provisions. Commerce's Office of Productivity, Technology and Innovation carries out these responsibilities.

Under Circular A-124, the Commerce Department is directed to monitor R&D agencies' compliance with Public Law 96-517 and the President's memorandum. According to Commerce patent officials, all 10 R&D agencies are implementing the act's titling and licensing provisions and are trying to make these provisions applicable to all contractors.

Commerce has developed an annual, voluntary reporting system for nonprofit organizations, primarily universities, to use when reporting on an invention's use or an effort to obtain use. To date, Commerce has received over 100 reports from about 30 universities. Over the next few months, these reports will be analyzed in order to publish statistics and summary data on invention use. Commerce officials, however, still have not decided on a reporting system to collect data from small businesses. They plan to resolve this issue shortly.

Commerce sent its regulations governing the disposition of patent rights, receiving and analyzing exceptional circumstance determinations, and other patent policies to OMB for approval in late January 1985.

PERCEIVED EFFECTS OF PUBLIC LAW 96-517 AND PRESIDENT REAGAN'S MEMORANDUM

Officials in the 10 agencies gave us the names of 13 associations whose members may have been affected by Public Law 96-517 and the President's memorandum. We contacted 9 of the 13 associations and, in our judgment, they represent a mix of the different types of groups affected by the law. (See appendix II.)

The officials at the 10 agencies and 9 trade associations and/or interest groups had mixed perceptions as to whether Public Law 96-517 and the President's memorandum have caused any change in small businesses' and nonprofit organizations' R&D activities. Officials of six federal agencies and two associations said that the act caused no changes in such R&D activities. On the other hand, officials of two other agencies and two interest groups believed that small businesses and nonprofit organizations have begun reporting more inventions as a result of the act. Three of these said that the act has given these groups an incentive to perform research work and that invention ownership is an important factor when these groups consider applying for federal funds. Another said members of his organization might forego a federal

contract or grant if they could not obtain title to an invention. And four thought that it was too early to attempt measuring any changes that could result from the act or expansion of the law, while several others had no opinion.

AGENCY COMMENTS AND GAO's RESPONSE

All 10 agencies included in our audit were sent copies of the draft report for review and comment. With the exception of NASA and EPA, the agencies agreed with our findings. At the suggestion of some agencies, we revised parts of the report to clarify information presented in the report. (Agency comments and our responses are included in apps. III through XII.)

NASA had several comments about statistical information presented on the number of funding agreements awarded and the number of inventions reported during fiscal years 1982-84. We revised parts of the report to more accurately present the data. However, we did not concur with NASA's comments relating to the types of licenses issued and terminated because we believe our report presents an accurate portrayal of agencies' activities.

EPA had concerns about statistical information presented in the report and our findings regarding the inclusion of the required patent clause in funding agreements awarded during 1984. Where appropriate, we revised the statistics to present more accurate information about EPA's activities. Our finding that EPA did not include the patent clause or incorporate by reference a patent clause in its agreements was based on our review of a sample of agreements awarded by the Washington headquarters staff. We did not intend for our finding to be interpreted that none of EPA's agreements met the requirements of the law and we have reworded our report accordingly.

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We are sending copies of this report to appropriate committees of both Houses; Representatives and Senators with particular interest; the Director of the Office of Management and Budget; the Director of the Office of Science and Technology Policy; the Administrator of the Small Business Administration; and to chief officials of the related research and development agencies. We will also make copies available to interested organizations and individuals, as appropriate, on request.

Sheldon J. Soodalter

for Charles A. Bowsher
Comptroller General
of the United States

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ABBREVIATIONS

DOD	Department of Defense
DOE	Department of Energy
DOT	Department of Transportation
EPA	Environmental Protection Agency
GAO	General Accounting Office
HHS	Department of Health and Human Services
NASA	National Aeronautics and Space Administration
NBS	National Bureau of Standards
NIH	National Institutes of Health
NOAA	National Oceanic and Atmospheric Administration
NSF	National Science Foundation
NTIS	National Technical Information Services
OMB	Office of Management and Budget
ONR	Office of Naval Research
OSR	Office of Scientific Research
R&D	research and development

GAO's METHODOLOGY FOR SELECTING FEDERAL AGENCIES' FUNDING AGREEMENTS

We selected a sample of research and development agreements to review within the 10 agencies in order to check compliance with the requirement that these agreements contain the requisite patent rights clause. We limited our review to new fiscal year 1984 awards made by the agencies' procurement offices located in the Washington metropolitan area. In addition, we reviewed only R&D agreements for experimental, developmental, or research work as defined by OMB Circular A-124.

Our procedure for selecting our samples of agreements at the agencies depended largely on the number of agreements reported and the format in which this information was reported to us. For example, some agencies' procurement offices in the metropolitan area made few awards whereas others made many awards. In addition, some officials provided separate listings of their contracts, grants, and cooperative agreement awards for the entire agency, including regional offices, while other officials gave us one listing of all types of agreements for the entire agency. Additionally, some agencies provided either separate or combined listings of awards by organizational units within the agency.

We reviewed all the agreements made by an agency or organization within an agency if 100 or fewer awards were made during fiscal year 1984. Where procurement offices awarded more than 100 agreements, we used the following sampling methods:

1. We took one sample of agreements at an agency if officials gave us a list of all R&D awards or separate lists of R&D grants, contracts, and cooperative agreement awards for all organizations within the agency.

2. We took a sample from each individual organization within an agency when officials provided either one or separate lists of agreements by organizations.

We excluded agreements that clearly did not conform to OMB's definition of experimental, developmental, or research work. In most cases, we were able to eliminate these agreements before we drew our samples.

Because our selection methods varied at the different agencies, detailed discussions of how we selected agreements for review are as follows.

DEPARTMENT OF COMMERCE

Department of Commerce officials reported that only two of the agency's organizations, National Bureau of Standards (NBS) and National Oceanic and Atmospheric Administration (NOAA), made R&D awards in fiscal year 1984. Together they awarded a total of 314 agreements; 111 were awarded by procurement offices in the metropolitan area. NBS awarded 59 agreements and NOAA awarded 52 agreements.

Initially, we planned to review all 111 awards. However, we found that none of NOAA's 52 agreements fit OMB Circular A-124's definition of R&D. As a result, we reviewed only the 59 NBS agreements (34 grants, 5 contracts, and 18 cooperative agreements).

DEPARTMENT OF ENERGY

DOE officials reported that the Washington area staff awarded 51 agreements in fiscal year 1984. We had planned to review all of these agreements but reviewed only 47 (39 grants and 8 contracts) because the remaining 4 were not new awards, but modifications to existing agreements.

DEPARTMENT OF DEFENSE

DOD officials gave us a computer list of all contracts awarded by the military units. We found that the Air Force's, Army's, and Navy's procurement offices in the Washington area were the most actively involved in issuing R&D contracts in fiscal year 1984.

Because of staffing and time constraints, we elected to review a sample of new contracts awarded by one major R&D organization within each service. We chose the Air Force's Office of Scientific Research (OSR), Army's Fort Detrick Medical R&D Acquisition Office, and Navy's Office of Naval Research (ONR). Together OSR, Fort Detrick, and ONR awarded 283 new R&D contracts. We drew a random sample of 110 contracts from the 283 for review.

DOD officials did not give us a Department-wide listing of fiscal year 1984 grant awards. Therefore, officials in the three services provided information on their grant awards. OSR officials gave us a list of 249 new grant agreements. We reviewed a random sample of 49 of these agreements.

Officials in Army's Medical Acquisition Office and Navy's ONR reported that they awarded 4 and 12 grants, respectively, in fiscal year 1984. We reviewed all of these agreements.

In summary, our universe of DOD agreements totaled 548 (283 contracts and 265 grants). We reviewed the following agreements in each service.

	Grants	Contracts
Air Force	49	25
Army	4	28
Navy	12	57
Total	65	110

ENVIRONMENTAL PROTECTION AGENCY

EPA officials gave us separate fiscal year 1984 grants and contracts listings to show awards made by all organizations within the agency, including regional offices. The Washington area staff awarded 263 agreements (257 grants and 6 contracts). We found that only one of the six contracts was for experimental, developmental, or research work. Therefore, it was included in our universe of awards for sampling purposes. We reviewed 50 grant agreements. The one contract agreement was not picked up in our sample.

DEPARTMENT OF HEALTH AND HUMAN SERVICES

At HHS, we limited our review to NIH, because its staff awarded 6,258 (86 percent) of HHS' 7,259 grants and 250 (67 percent) of HHS' 375 contracts in fiscal year 1984.

Within NIH, officials gave us separate grants and contracts listings for the entire agency, which consists of 10 institutes. We reviewed 103 of the 3,115 grants awarded by the three institutes most actively involved in issuing grants: the Cancer; Arthritis; and Heart, Lung and Blood Institutes. For contracts, we reviewed 50 of the 250 contracts awarded by the three institutes most actively involved in issuing contracts: the Cancer, Child Health; and Heart, Lung, and Blood Institutes. In summary, our universe of NIH agreements totaled 3,365, of which we reviewed 153 (103 grants and 50 contracts) agreements.

DEPARTMENT OF THE INTERIOR

Officials in four organizations within Interior reported that they awarded 651 R&D agreements in fiscal year 1984. The four were the U.S. Geological Survey, Fish and Wildlife Service, Bureau of Mines, and Office of Water Research. Only 370 of the 651 were awarded by Interior's headquarters staff. We reviewed 170 of the 370 agreements. The actual number of agreements reviewed per organization was

U.S. Geological Survey	95	(72 grants, 9 contracts, and 14 cooperative agreements)
Bureau of Mines	57	(31 grants and 26 contracts)
Office of Water Research	18	(17 grants and 1 contract)
Total	170	

We did not review any of the Fish and Wildlife Service's 200 agreements because, according to agency officials, most did not fit OMB's definition of experimental, developmental, or research work.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

NASA officials gave us separate grants and contracts listings for the entire agency, including regional offices. The Washington area staff awarded 271 agreements. We excluded 63 agreements from our universe of awards because they were clearly not for R&D activities as defined by OMB. For the remaining 208 agreements, we reviewed a random sample of 50 agreements (45 grants and 5 contracts).

NATIONAL SCIENCE FOUNDATION

NSF officials gave us one listing of the agency's fiscal year 1984 awards. According to the list, the Washington area staff awarded 5,446 new R&D agreements in fiscal year 1984. We reviewed a random sample of 150 of these agreements.

DEPARTMENT OF TRANSPORTATION

DOT officials gave us separate grants and contracts listings for each of seven organizations within DOT. Although contracting officials in all seven organizations reported having awarded R&D contracts, we found that only two, the Federal Aviation Administration and the Maritime Administration, made awards for experimental, developmental, or research work. Together these two units issued 54 new contracts in fiscal year 1984.

DOT officials told us that grants awarded by the other five organizations during fiscal year 1984 were, for the most part, not for R&D as defined by OMB. As a result, we elected to review only the contracts awarded by the Federal Aviation Administration and the Maritime Administration. We actually reviewed 18 Federal Aviation Administration contracts and 34 Maritime Administration contracts. Two others were not available during our review.

DEPARTMENT OF AGRICULTURE

According to documentation provided by USDA officials, only three organizations' Washington area staffs made R&D awards in fiscal year 1984. These were the Forest Service, the Agricultural

Research Service, and the Grants Administrative Management Office within the Office of Grants and Program Systems. Together these organizations awarded 478 agreements.

Overall, we reviewed 120 agreements (80 grants and 40 contracts) from two of the three organizations. We did not review any of the eight service agreements because they were not for R&D activities as defined by OMB. We had planned to review all 100 Agricultural Research Service agreements but reviewed only 70 (18 grants, 10 contracts, and 42 cooperative agreements) because the other 30 were either not relevant to our review or were unavailable during our review. At the Office of Grants and Program Systems, we reviewed 50 of the office's 370 new R&D grant agreements.

ASSOCIATIONS REPRESENTING SMALL BUSINESS AND/OR NONPROFIT ORGANIZATIONS

American Association of Small Research Companies

American Patent Law Association

Association of Amercian Universities

National Association of Colleges and Universities

National Association of State Universities and Land Grant Colleges

National Council for Industrial Innovation

National Federation of Independent Businesses

National Small Business Government Contractors Association

Society of University Patent Administrators

APPENDIX III

DEPARTMENT OF AGRICULTURE
OFFICE OF THE SECRETARY
WASHINGTON, D. C. 20250

MAY 29 1985

Mr. J. Dexter Peach
Director, Resources, Community, and
Economic Development Division
General Accounting Office
Washington, DC 20548

Dear Mr. Peach:

This is in reply to your letter of April 23, 1985.

The Department of Agriculture does not have any comments on the draft report on Federal agencies' implementation of the Patent and Trademark Amendments of 1980 (Public Law 96-517). We appreciate the opportunity to comment on the report.

Sincerely,

ORVILLE G. BENTLEY
Assistant Secretary
Science and Education

APPENDIX IV

Department of Energy
Washington, DC 20585

MAY 29 1985

Mr. J. Dexter Peach
Director, Resources, Community and
Economic Development Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Peach:

The Department of Energy (DOE) appreciates the opportunity to review and comment on the General Accounting Office (GAO) draft report entitled "Federal Agencies' Implementation of the Patent and Trademark Amendments of 1980 (Public Law 96-517)."

We are pleased to note that of the agencies audited, including DOE, all were found to be implementing the provisions of Public Law 96-517.

Thank you for the opportunity to comment.

Sincerely,

Martha Hesse Dolan
Assistant Secretary
Management and Administration

APPENDIX IV

Department of Energy
Washington, DC 20585

MAY 29 1995

Mr. Mark Nadel
Resources, Community and Economic
Development Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Nadel:

In response to Mr. J. Dexter Peach's request of April 23, 1985, the Department of Energy's formal comments on the General Accounting Office (GAO) draft report entitled "Federal Agencies' Implementation of the Patent and Trademark Amendments of 1980 (Public Law 96-517)" are being submitted by separate letter to the GAO.

A correction to the report is enclosed.

Sincerely,

Martha Hesse Dolan
Assistant Secretary
Management and Administration

Enclosure

APPENDIX IV

Correction for the GAO Draft Report "Federal Agencies' Implementation of the Patent and Trademark Amendments of 1980 (Public Law 96-517)" (GAO/RCED-85-94)

1. page 10, Table 4, Summary of Royalties Collected on Federally owned Inventions

   For DOE, for fiscal year 1983, the amount of royalties collected on Federally owned inventions was $82,450.

[GAO COMMENT: We updated table 4, Summary of Royalties Collected On Federally Owned Inventions, on page 10 to accurately reflect the amount of royalties DOE collected in fiscal year 1983.]

[GAO NOTE: The agency's page and table references to our draft report have been changed to reflect their position in the printed report.]

APPENDIX V

THE UNDER SECRETARY OF DEFENSE

WASHINGTON, DC 20301-3010

RESEARCH AND ENGINEERING

(AM/IP)

: 3 ·42Y 198[illegible]

Honorable Charles A. Bowsher
Comptroller General of the
United States
441 G Street, N.W.
Washington, D.C. 20548

Dear Mr. Bowsher:

This is the Department of Defense (DoD) response to the draft General Accounting Office (GAO) report, GAO/RCED-85-94, "Federal Agencies' Implementation of the Patent and Trademark Amendments of 1980 (Public Law 96-517)," dated April 24, 1985 (GAO Code No. 005709), OSD Case No. 6739. The DoD concurs with the draft report, except for a few technical corrections that are being provided to members of your staff separately.

The DoD appreciates the opportunity to review and comment on the draft report.

Sincerely,

James P. Wade, Jr.

James P. Wade, Jr.
Acting

APPENDIX VI

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAY 23 1985

OFFICE OF
POLICY, PLANNING AND EVALUATION

Mr. J. Dexter Peach
Director
Resources, Community and Economic
Development Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Peach:

On April 23, 1985, the General Accounting Office (GAO) issued a draft report to the Environmental Protection Agency (EPA) for review and comment. The report is entitled "Federal Agencies' Implementation of the Patent and Trademark Amendments of 1980 (Public Law 96-517)." As required by Public Law 96-226, EPA prepared this response to the report.

Prior to addressing matters specific to EPA, there are a few general concerns that require clarification. EPA suggests that the term "titling," which is used several times, be replaced with "invention ownership." "Titling" is not the usual way in which one refers to ownership of invention rights. There is a related matter in lines 4 and 5 on page 4. It is not accurate to speak of "retaining title or granting title to inventions," if one is referring to the Government, as apparently is the case in these lines. It would be more accurate to refer to "acquisition of title by the Government or for permitting recipients of funding agreements to retain title." Ordinarily title to an invention made under a funding agreement initially resides in the recipient, rather than in the Government as the present statement suggests.

[GAO COMMENT: We revised the statement on page 4, lines 4-5, to more accurately describe invention ownership options.]

On page 7, the first paragraph is inaccurate. It states that in calendar year 1984 EPA funding agreements neither contained a patent clause nor made reference to one. In the case of EPA contracts, each one physically included a patent rights clause until the Federal Acquisition Regulation (FAR) published its patent provisions on March 30, 1984 (49 Fed. Reg. 12972). EPA's contracts became subject to these FAR patent regulations on April 1, 1984. Contracts awarded on or after that date have been subject to the appropriate FAR patent clause. The proper FAR patent clause is included by reference in each EPA contract that may involve experimental, developmental or research work.

[GAO COMMENT: We revised paragraph 2, page 5 to accurately reflect which EPA funding agreements did not include a patent clause or reference to a clause. Because of the small number of contracts awarded in fiscal year 1984 by EPA's headquarters staff, none were selected for review in our sample.]

As for grants and cooperative agreements, EPA promulgated a new regulation on September 30, 1983 (48 Fed. Reg. 45056). This regulation contains Subpart K (48 Fed. Reg. 45073) which pertains to invention rights. Subpart K states that a recipient that is a small business or nonprofit organization is subject to Public Law 96-517. In 1984 these requirements regarding invention rights, including those applicable to other than small businesses and nonprofit organizations were included by reference in each grant and cooperative agreement. This was, and still is, accomplished by the inclusion on each funding agreement of a statement that the award is subject to EPA grant regulations at 40 CFR Chapter I, Subchapter B, which includes the patent provisions that were included in the Federal Register issuance of September 30, 1983.

Thus it is EPA's position that in calendar year 1984 EPA included by reference the required invention rights clause in each of its contracts, grants, and cooperative agreements.

[GAO COMMENT: At the time of our review 46 of the 50 grants and cooperative agreements reviewed did not contain the required patent clause or incorporate a reference to the patent clause. We asked officials in EPA's Grants Administration Division and Office of General Counsel why the agreements did not include the clause or reference to the clause and neither knew why. Therefore, we still maintain that our finding regarding the EPA grants and cooperative agreements included in our sample is correct as stated in the report.]

The sentence commencing in line 6 on page 5 is not fully accurate with regard to EPA. The sentence would be accurate if it were amended to indicate that it applies only to inventions made under contracts, grants or cooperative agreements awarded to "large" businesses under the Resource Conservation and Recovery Act (RCRA). In keeping with the President's Statement of Government Patent Policy of February 1983, in awards to "large" businesses made under an authorization other than the RCRA, EPA normally uses an invention rights clause that leaves title to inventions with the "large" business.

[GAO COMMENT: We revised the statement on lines 6-10, page 5, to clarify which businesses are covered under the Resource Conservation and Recovery Act (RCRA).]

In Table 1, page 8, the information for EPA should be revised. Because the number of new funding agreements listed for FY 82 and FY 83 seemed too high, we decided to verify these numbers and the number for FY 84. We assume that the number of new funding agreements is intended to include only those that relate to research work and which would therefore be subject to an invention rights clause. As for reported inventions, if the numbers shown are to include all inventions reported in a given fiscal year, the numbers shown for EPA are not correct. Based on these assumptions, for the indicated fiscal years the number of funding agreements and reported inventions respectively should be changed to:

FY 82		FY 83		FY 84	
451	22	353	18	378	13

[GAO COMMENT: The table 1 referred to from the draft report has been separated into tables 1 and 2, pages 6 and 7 of the letter, respectively. The EPA figures have been changed in both tables to more accurately reflect the number of agreements awarded and inventions reported.]

In Appendix I the stated result of the EPA sampling is somewhat misleading so far as the stated number of research contracts is concerned. This appears to be the result of having sampled only EPA Headquarters contract activity. The vast majority of EPA research contracts are awarded out of our research centers at Research Triangle Park, North Carolina, and Cincinnati, Ohio. The number of funding agreements listed above includes contracts awarded at these centers, as well as those awarded at Headquarters. As such, we believe that GAO's decision to review Headquarters controls did not produce usable data because so little research contracting is done in Washington, D.C.

We appreciate the opportunity to comment on the draft report.

Sincerely yours,

Milton Russell
Assistant Administrator
for Policy, Planning and Evaluation

[GAO NOTE: Some of the agency's page and other references to our draft report have been changed to reflect their position in the printed report.]

APPENDIX VII

DEPARTMENT OF HEALTH & HUMAN SERVICES

Office of Inspector General

Washington D C 20201

MAY

Mr. Richard L. Fogel
Director, Human Resources
Division
United States General
Accounting Office
Washington, D.C. 20548

Dear Mr. Fogel:

Thank you for the opportunity to comment on your draft report, "Federal Agencies' Implementation of the Patent and Trademark Amendments of 1980 (Public Law 96-517)." The Department has carefully reviewed your report and has no comments to make other than some technical comments which were provided directly to your staff.

We appreciate the opportunity to comment on this draft report before its publication.

Sincerely yours,

Richard P. Kusserow
Inspector General

General Comments

The efforts of the Department of Commerce to develop a system for grantees and/or contractors to use for reporting on the use of inventions, are stated to have resulted in an annual voluntary reporting system for nonprofit organizations. The number of reports filed (100) appears to be low in comparison to the 16,992 inventions reported by recipients of federally funded research awards during Fiscal Years 1982, 1983, and 1984. An analysis of a small sample such as this may not provide reliable data on invention use.

Technical Comments

--Background, Page 2, Paragraph 1, Line 7

The statement "However, of the approximately 25,000 government-owned inventions, only about 5 percent have been utilized" is not meaningful without a comparison to non-Government experience.

[GAO COMMENT: We did not mean to imply that the 5 percent utilization rate of government-owned inventions was favorable or unfavorable as compared to non-government experiences. This was not a part of our audit objectives.]

--Page 10, Paragraph 2, Line 6

The sentence on line 6 which reads in part "HHS is the only agency that has . . . ." should be amended to read "The Interior Department is the only agency that has . . . ."

[GAO COMMENT: Line 6, paragraph 2, page 10 has been revised as follows: "Interior and NTIS are the only agencies that have terminated licenses. . . ."]

[GAO NOTE: Some of the agency's page and other references to our draft report have been changed to reflect their position in the printed report.]

United States Department of the Interior

OFFICE OF THE SOLICITOR
WASHINGTON, D.C. 20240

MAY 20 1985

PBA.GL.9862

J. Dexter Peach
Director, Resources Community
and Economic Development
United States General Accounting Office
Washington, D.C. 20548

Re: Comments on General Accounting Office (GAO) Draft Report on Implementation of Patent and Trademark Amendments of 1980 (Public Law 96-517)

Dear Mr. Peach:

The Secretary of the Interior has referred this referenced report to our Office for comment and requested that we respond on his behalf.

Generally, we are in agreement that the conclusions reached in the report are a fair statement of the policies and procedures actually being followed by this Department. However, certain minor changes and explanations should be made to give the reader a more complete understanding of the actual situation. For example, it should be made clear that something may be an invention and not patented, and that transferring the results of such an unpatented invention to the private sector for commercialization purposes may occur without a patent license. This could be accomplished by a cost-sharing agreement or by publication, coupled with technical advice and assistance.

Another explanatory point we believe should be made is that Public Law 96-517 gives small business and nonprofit organizations, including universities, a defeasible option to retain title to inventions made under a funding agreement. Thus, if the contractor or grantee failed to comply with certain provisions of paragraph (c) of Section 202 of Title 35 (35 U.S.C. § 202), title to the invention could revert to the United States.

Table 1 on page 8 of the draft report appears to be somewhat misleading when it correlates the number of funding agreements with the number of inventions reported for the fiscal years indicated. Most of the inventions attributed to this Department were not from work accomplished under funding agreements, but rather were reported by employee-inventors of the Department totally outside the scope of the invention reporting requirements in Public Law 96-517.

on lines 8-11

Also, the statement/in the last paragraph of page 7 of the report should be modified. A nonexclusive license may be to several licensees as stated, or it could, if the licensee was the only requester and so indicated, be to a single licensee. Also, the statement on page 8, para. 2, lines 6-10, was correct originally; however, it is now incorrect as

Public 98-620 transferred from GSA to the Secretary of Commerce the authority to issue regulations under 35 U.S.C. § 208.

The Table 3 on page 9 of the report appears incorrect with respect to our Department. Nonexclusive licenses granted by this Department (excluding NTIS) for fiscal years 82-84 should be as follows: 12 for 1982; 1 for 1983; and 4 for 1984. In order to be more explanatory, it is suggested that the licenses granted by NTIS be broken down by the agency which actually funded the work under the agreement resulting in the reported invention. As a follow-on, Table 4 on page 10 should also break-out the royalties collected by NTIS so that the amount attributed to each funding agency is indicated.

We also note that Table 1 on page 8 of the report and the Appendix in pages 4-5 appear inconsistent as to the number of agreements awarded in fiscal year 1984. The Table gives the number 451 and the Appendix, the number 370. Unless the difference (81) can be attributed to Departmental agencies other than the four reporting and considered in the Appendix, we are unable to reconcile this difference in the two numbers.

Thank you for the opportunity to comment on the report.

Sincerely yours,

Frank K. Richardson
for Solicitor

[GAO COMMENT: We agreed with Interior's comments regarding data presented on pages 8, 9 and 10 of the report. Information about the number of funding agreements awarded and the number of inventions reported are presented in separate tables (see tables 1 and 2, pages 6 and 7, respectively) and discussed separately in the text. We revised the definition of nonexclusive license and included information about Commerce's authority to issue licensing regulations. We also updated Interior's licensing and funding agreement statistics included in tables 1 and 2 and appendix I.]

[GAO NOTE: Some of the agency's page and other references to our draft report have been changed to reflect their position in the printed report.]

APPENDIX IX

National Aeronautics and
Space Administration

Washington, D.C.
20546

Reply to Attn of NIP

MAY 22 1985

Mr. Frank C. Conahan
Director
National Security and International
Affairs Division
U.S. General Accounting Office
Washington, DC 20548

Dear Mr. Conahan:

Thank you for the opportunity to comment on GAO's draft report entitled, "Federal Agencies' Implementation of the Patent and Trademark Amendments of 1980 (Public Law 96-517)", (Code 005709).

With the incorporation of changes specifically noted on the attached we believe the accuracy of the report could be improved.

Sincerely,

C. Robert Nysmith
Associate Administrator
for Management

Enclosure

NASA Comments on "Federal Agencies' Implementation of the Patent and Trademark Amendments of 1980" (Pub. L. 96-517)

The following comments are made to correct errors in the presentation of NASA's statistical data and to provide more factual preciseness in the subject report.

1. Table 1 (page 8) is not understood. There is no correlation between either the type or number of funding agreements listed and the number of inventions reported, or any indication of how either relates to Pub. L. 96-517. It was our understanding that the number of funding agreements (agency-wide) and the number of inventions reported to an agency were to be treated separately (and the tables not combined), and NASA's statistical data was provided on that basis. Thus it is recommended that separate tables be provided, and each be discussed separately in its own context. Given that separation, there should be a lead-in for the table listing the number of funding agreements as follows: "The number of agreements listed are new agency-wide research and development funding agreements (contracts, grants, and cooperative agreements) entered into for the given fiscal year." In addition, the number of funding agreements listed for NASA for FY 1983 should be corrected to read "1442."

2. Assuming a separate table listing the number of inventions reported to an agency, there should be a lead-in for the table as follows: "The number of inventions listed are those reported agency-wide under all active funding agreements for the given fiscal year." Also, the NASA data needs to be corrected in that as presented it includes inventions reported by civil service employees as well as those reported under funding agreements. The correct numbers are 760, 852, and 678 for FY 1982, 1983, and 1984, respectively. These are all inventions reported under all active funding agreements, agency-wide, during the year in question. It is particularly pointed out that these funding agreements are not correlatable with the "new" funding agreements listed in the separate table in that they are on-going and have been entered into at different times not reflected in any of the data presented. Further, it is recommended that any listing of inventions reported have a break-out that distinguishes between those reported under funding agreements with small businesses and nonprofit organizations that are subject to Pub. L. 96-517, and those reported under all other funding agreements. For NASA, of the total number of inventions reported, 6, 20, and 43 were by small business firms or nonprofit organizations for FY 1982,

1983, and 1984, respectively. All others were reported pursuant to the requirements of section 305(b) of the National Aeronautics and Space Act of 1958, as amended (42 U.S.C. 2457(b)). In reviewing the significance of this break-out, it is important to be aware of the conceptual difference between the right of a contractor or grantee to obtain title to a reported invention (whether under Pub. L. 96-517, by a waiver granted under the Space Act, or pursuant to the Presidential Memorandum on Government Patent Policy) from the requirements that an invention be reported (irrespective of whether or not the contractor or grantee obtains title). It is NASA's experience that it is more the difference in the reporting requirements of Pub. L. 96-517 versus the Space Act, rather than whether or not the contractor or grantee may obtain title, that accounts for the marked difference in the number of inventions reported under funding agreements with small business and nonprofit organizations when compared to other funding agreements.

[GAO COMMENT: We revised the report by presenting separate tables and discussion of the number of new R&D agreements awarded and inventions reported (see tables 1 and 2, pages 6 and 7, respectively).]

3. NASA does issue partially exclusive licenses. Thus the sentence on lines 1-4 of page 8 , which states that NTIS is the only agency that does so, should be rewritten to reflect that fact.

[GAO COMMENT: We did not include NASA in our discussion of partially exclusive licenses on lines 1-4 of page 8 because, according to agency officials, NASA did not issue any partially exclusive licenses between fiscal years 1982 and 1984.]

4. While it may be an accurate statement that 80% of all licenses issued were nonexclusive when averaged for all agencies over a three year period, it does not correctly reflect NASA's experience nor the trend for NASA (and perhaps other agencies) in responding to the intent of Pub. L. 96-517. Over that period, 32.3% of the licenses granted by NASA were exclusive. However, a more important indicia of compliance with the intent of Pub. L. 96-517 is the following trend: 20.9% exclusive licenses in FY 1982, 36% in FY 1983, and 46.4% in FY 1985. The first sentence, paragraph 1, page 9 should be rewritten to reflect the foregoing.

[GAO COMMENT: Our summary statement of the types of licenses issued during fiscal years 1982-84 was not intended to reflect individual agencies' licensing activities. Therefore, we believe the sentence should not be revised.]

5. On page 10 the royalty income reflected in Table 4 is incorrect for NASA. It should read $14,877 for FY 1982, $24,025 for FY 1983, and $98,258 for FY 1984. Again, it is the trend that is more significant than absolute numbers, particularly since some time may be required to successfully market an invention once a license has been granted. Also, it is pointed out that while royalty income may be one measure of the effectiveness of a licensing program, the basic purpose of Pub. L. 96-517 is to provide incentives for greater commercial use of Government-funded inventions and not to increase royalty income. Thus an even better measure of the effectiveness of a licensing program would be the extent of commercial use under license rather than royalty income derived therefrom. For example, NASA (and perhaps other agencies) has licensed some highly commercially successful inventions either royalty free or for a relatively low royalty for policy reasons that transcend a desire to maximize royalties. Inventions that contribute to the quality of life, such as those relating to significant health or safety needs, are energy saving, or improve the environment, may well be considered in that category. It is recommended that any discussion of licensing reflect the above considerations.

[GAO COMMENT: Table 4, Summary of Royalties Collected on Federally Owned Inventions, on page 10 was revised to accurately reflect the amount of royalties NASA collected in fiscal years 1982, 1983, and 1984.]

6. NASA does terminate licenses because a company has not submitted a report or is not pursuing commercialization of an invention under license. Thus the last sentence of the second paragraph on page 10 , which states that HHS is the only agency to have done so, should be rewritten to reflect that fact.

[GAO COMMENT: We did not change the last sentence in the second paragraph on page 10 to specifically address this comment because we believe the statement is correct. According to NASA officials, NASA did not terminate a license in fiscal years 1982, 1983, or 1984.]

John E. O'Brien for

S. Neil Hosenball
General Counsel

[GAO NOTE: Some of the agency's page and other references to our draft report have been changed to reflect their position in the printed report.]

APPENDIX X

NATIONAL SCIENCE FOUNDATION
WASHINGTON D C 20550

Division of Audit and Oversight

May 14, 1985

Mr. J. Dexter Peach
Director
Resources, Community, and
Economic Development Division
U. S. General Accounting Office
441 G Street, NW
Washington, DC 20548

Dear Mr. Peach:

The draft report concerning the implementation of the "Bayh-Dole Act" which you sent on April 23, 1985, appears well done and we have no substantive comments to offer. A minor suggestion concerning wording is enclosed. Thank you for the opportunity to comment.

Sincerely yours,

Jerome H. Fregeau
Director
Division of Audit and Oversight

Enclosure

1. Throughout the draft report, reference is made to "P.L. 96-517". At one point, on page 1, "Chapter 18 of P.L. 96-517" is cited. This form of reference is both technically incorrect and actually uninformative. The correct legal citation would be "Chapter 18 of Title 35 of the United States Code". That could be followed by ", commonly called the 'Bayh-Dole Act'," and later references made to "the Bayh-Dole Act". Otherwise, later references could be to "Chapter 18". If the authors persist in citing the public law, they should at least in the first citation refer to "section 6 of P.L. 96-517", because there was much else in that law besides the Bayh-Dole Act, and note that it was codified as Chapter 18 of Title 35.

[GAO COMMENT: We deleted reference to "Chapter 18" in the report and used a reference to Public Law 96-517 or the act instead.]

[GAO NOTE: The agency's page and other references to our draft report have been changed to reflect their position in the printed report.]

APPENDIX XI

U.S. Department of Transportation
Office of the Secretary of Transportation

400 Seventh St., S.W.
Washington, D.C. 20590

MAY 22 1985

Mr. J. Dexter Peach
Director
Resources, Community and Economic
Development Division
U.S. General Accounting Office
Washington, DC 20548

Dear Mr. Peach:

Enclosed are two copies of the Department of Transportation's comments concerning the U.S. General Accounting Office draft report entitled, "Federal Agencies' Implementation of the Patent and Trademark Amendments of 1980," P.L. 96-517.

Thank you for the opportunity to review this report. If you have any questions concerning our reply, please call me on 426-4747.

Sincerely,

Bruce T. Barkley
Director of Management Planning

Enclosures

DEPARTMENT OF TRANSPORTATION
STATEMENT ON GAO REPORT

I. TITLE: DRAFT OF A PROPOSED REPORT:

Federal Agencies' Implementation of the Patent and Trademarks Amendments of 1980 (Public Law 96-517)

II. SUMMARY OF GAO FINDINGS AND RECOMMENDATIONS:

The GAO found that the 10 federal agencies surveyed were all properly implementing the law, and that the Department of Commerce is fulfilling its role as the lead agency in monitoring implementation of the law. GAO also found mixed perceptions among the 10 agencies and various trade associations, as to whether the law has caused increases or decreases in R & D activity by small businesses and non-profit organizations. The GAO did not make any recommendations.

III. SUMMARY OF DEPARTMENT OF TRANSPORTATION POSITION:

The Department of Transportation (DOT) finds GAO's description of the department's actions to be accurate and complete.

IV. STATUS OF CORRECTIVE ACTION:

The GAO did not make any recommendations regarding DOT's implementation of Public Law 96-517; accordingly, corrective action is not required.

UNITED STATES DEPARTMENT OF COMMERCE
The Assistant Secretary for Administration
Washington, D.C. 20230

JUN 27 1985

Mr. J. Dexter Peach
Director, Resources, Community, and
Economic Development Division
United States General
Accounting Office
Washington, D.C. 20548

Dear Mr. Peach:

This is in reply to GAO's letter of April 23, 1985 requesting comments on the draft report entitled "Federal Agencies' Implementation of the Patent and Trademark Amendments of 1980."

We have reviewed the enclosed comments of the Assistant Secretary for Productivity, Technology and Innovation and believe they are responsive to the matters discussed in the report.

Sincerely,

Kay Burlow

Kay Burlow
Assistant Secretary
for Administration

Enclosure

APPENDIX XII

UNITED STATES DEPARTMENT OF COMMERCE
The Assistant Secretary for Productivity, Technology and Innovation
Washington, D.C. 20230
(202) 377-1984

JUN 11 1985

Honorable J. Dexter Peach
Director, U.S. General Accounting
Office
Washington, D.C. 20548

Dear Mr. Peach:

Thank you for your letter regarding your agency's draft report on Federal Agencies' Implementation of the Patent and Trademark Amendments of 1980 (Public Law 96-517).

We have reviewed the draft report and, like the two previous General Accounting Office reports on this subject, it is a fair and reasonable statement of what has happened. Enclosed are some suggested changes, prepared by our National Technical Information Service, to several pages of the report.

The law was enacted over four years ago, and we believe that it now should be possible to obtain some indications of the law's effect in fostering the commercialization of federally-funded innovation. Accordingly, and if you wish, we would be pleased to assist in planning your next year's review in a way that shifts emphasis from agency compliance, which does not seem to be an issue, to private sector use of federally-funded inventions.

For additional information, please contact Norman J. Latker, Director, Federal Technology Management Policy Division, Office of Productivity, Technology and Innovation, U.S. Department of Commerce, Room H4837, or call 377-0659.

Sincerely,

D. Bruce Merrifield

Enclosure

[GAO COMMENT: We agreed with some of Commerce's suggested changes and revised the report accordingly.]

(005709)